

CIRCULAR No. 3.
(JUNE, 1903.)

HOG CHOLERA.

BY ARCHIBALD R. WARD,
Veterinarian and Bacteriologist.

Symptoms.—It is quite impossible to mention a series of symptoms to be relied upon always in recognizing the disease. The name is misleading, in that the bowels are not necessarily loose, but a diarrhea is most common. There may be constipation. Such animals are spiritless and generally do not stir about. In advanced cases there is a staggering gait. There is frequently trouble with the eyes, causing a discharge, and there may be a reddening of the skin on various parts of the body. Some die of an acute type of the disease within a few days after coming down, while others will suffer for weeks from a chronic (mild) form.

Post-Mortem Appearances.—The most constant of the diseased alterations of the carcass is the presence of little red spots sprinkled over the various organs. They are found on the kidneys, on the intestines, or stomach, heart, diaphragm, lungs, or the lining of the lung or intestinal cavities and elsewhere. Little glands colored red by blood are found scattered along the membrane that attaches the intestines to the back. The spleen is enlarged and darkened in color. In cases of long standing there may be found ulcers on the inside of the intestines. They are circular in shape, project slightly, and are grayish-yellow or black in color. These ulcers are most apt to be found in the large intestine. If ulcers are found, it is usually safe to conclude that the disease is hog cholera, but the absence of them is not significant. The lungs are not commonly seriously diseased, but may be solidified in spots.

How Hog Cholera Is Spread.—The disease is caused by germs which are responsible for its existence and spread. The germs are present in the intestinal discharge of the sick, and consequently the disease spreads rapidly when introduced among pigs. Hog cholera can be prevented

by paying strict attention to the various means by which it is spread from the sick to the healthy. Chief among these are:

1. Purchase of hogs from diseased herds. The animals may be actually suffering from a mild attack of cholera or they may convey the germs upon the filth adhering to their bodies.

2. Railroad shipping-pens, cars, and other inclosures may harbor infecting material dropped by diseased hogs in transit.

3. There is an overwhelming amount of evidence showing that the disease may be carried by streams of water. A very fruitful means of spreading the disease is to throw a dead hog in a stream or to allow diseased hogs to have access to a stream.

4. The germs may be carried from the diseased to the healthy by the filth adhering to the shoes of a man, the feet of a dog, or farm utensils. When hog cholera is prevalent in a community, owners of healthy hogs should not go among sick hogs, because of the danger of carrying the infection home.

5. Buzzards and other carrion birds and animals may spread the disease.

A few pigs only are affected when the disease first breaks out, and if they are noticed and prompt action taken the spread may be checked. The healthy ones should be removed from the pens or field where the disease has appeared, and be given a supply of well water. Animals kept in small inclosures are less apt to contract the disease than those running on large areas of land, as they are usually allowed to do in California. Wallowing-holes of mud are conducive to the spread of the disease. The dead should be burned or buried in quicklime.

Buildings, feeding-troughs, and land contaminated by sick pigs will harbor the disease for many months. After an outbreak the disinfection of buildings and feeding-troughs is necessary before introducing healthy hogs. The following is a good cheap disinfectant:

Crude carbolic acid.....	½ gallon.
Crude sulfuric acid.....	½ gallon.

“These two substances should be mixed in tubs or glass vessels. The sulfuric acid is very slowly added to the carbolic acid. During the mixing a large amount of heat is developed. The disinfecting power is heightened if the amount of heat is kept down by placing the tub or demijohn containing the carbolic acid in cold water, while the sulfuric acid is being added. The resulting mixture is added to water in the ratio of 1 to 20. One gallon of mixed acid will thus furnish 20 gallons of a strong disinfecting solution, having a slightly milky appearance. The mixture should be applied to the walls and floors of the pens, saturating them with it.”

Small yards may be disinfected with slaked lime. Extensive ranges are preferably not used for a year, although some authorities place the

period for the eradication of infection by natural climatic agencies at six months.

Treatment.—There is no medicinal treatment that can be relied upon to cure every case of hog cholera. In numerous cases medicines have been administered and the animals have recovered, but such an occurrence does not prove that the medicine induced the favorable change. It is a matter of common observation that the violence of the disease may abate very abruptly without apparent cause.

Much can be done to ward off the disease and perhaps to cure mild cases by the use of the following medicine recommended by Dr. D. E. Salmon, Chief of the Bureau of Animal Industry of the United States Department of Agriculture:

	Pounds.
Wood charcoal.....	1
Sulfur.....	1
Sodium chlorid.....	2
Sodium bicarbonate.....	2
Sodium hyposulfite.....	2
Sodium sulfate.....	1
Antimony sulfid (black antimony).....	1

“These ingredients should be completely pulverized and thoroughly mixed. In case there is a diarrhea the sulfate of sodium may be omitted.

“The dose of this mixture is a large tablespoonful for each 200 pounds weight of hogs to be treated, and it should be given only once a day. When hogs are affected with these diseases they should not be fed on corn alone, but they should have at least once a day soft feed, made by mixing bran and middlings, or middlings and corn meal, or ground oats and corn, or crushed wheat with hot water, and then stirring into this the proper quantity of the medicine. Hogs are fond of this mixture, it increases their appetite, and when they once taste of food with which it has been mixed they will eat it though nothing else will tempt them.

“Animals that are very sick and that will not come to the feed should be drenched with the medicine shaken up with water. Great care should be exercised in drenching hogs or they will be suffocated. Do not turn the hog on its back to drench it, but pull the cheek away from the teeth so as to form a pouch, into which the medicine may be slowly poured. It will flow from the cheek into the mouth, and when the hog finds out what it is, it will stop squealing and swallow. In our experiments hogs which were so sick that they would eat nothing have commenced to eat very soon after getting a dose of the remedy, and have steadily improved until they appeared perfectly well.

“This medicine may also be used as a preventive of these diseases, and for this purpose should be put in the feed of the whole herd. Care should of course be observed to see that each animal receives its proper

share. In cases where it has been given a fair trial, it has apparently cured most of the animals which were sick and has stopped the progress of the disease in the herds. It also appears to be an excellent appetizer and stimulant of the processes of digestion and assimilation, and when given to unthrifty hogs it increases the appetite, causes them to take on flesh and assume a thrifty appearance.”

The administration of the medicine is useless unless the patients are kept under comfortable conditions with careful feeding.

There has been much careful experimental work done in an effort to produce a serum for injecting under the skin of hogs, to cure the cholera or to immunize the system against it. Some experiments have yielded satisfactory results on a small scale, but this line of treatment has not progressed far enough to be of practical use as yet.

Quarantine Regulations for Hog Cholera.—Prevention of the disease by strict quarantine must ever be relied upon to check the enormous losses from hog cholera. Individuals who have carefully studied the disease can accomplish much by voluntarily observing the precautions necessary to prevent its spread. But to effectually restrict hog cholera, regulations with the force of law must exist, as well as a corps of men to enforce them. California is sadly lacking in these requisites, and until they are supplied the swine industry must continue to suffer appalling losses annually.

As an example of the kind of measures necessary for the control of hog cholera there is appended a copy of a circular giving directions for quarantining infected animals:

MINNESOTA STATE BOARD OF HEALTH.

CIRCULAR OF INFORMATION FOR LOCAL HEALTH OFFICERS.

FOR QUARANTINING HOGS SUFFERING FROM ANY INFECTIOUS DISEASE.

The proper quarantine of hogs imposes no hardship upon either the owner or the hogs themselves. The chief purpose of the Board of Health in quarantining any suspicious disease among hogs is to protect the financial interests of the hog-raisers. Valuable time is often lost before quarantine is established. This permits serious spread of the disease to take place, and makes its control much more difficult.

The disease now prevailing in different portions of the State varies in symptoms in different localities and in different herds. It may be set down as a rule, however, when any infectious (catching) disease appears among swine that it is hog cholera, modified more or less in symptoms by well-known complications.

When hogs begin to sicken and die during the prevalence of hog cholera the disease should be reported to the local health officer or chairman of the town board, and quarantine should be established at once. It is a simple matter to release quarantine, and should it be proven that the disease is not hog cholera, no harm has been done by such quarantine.

All health officers and acting health officers are therefore instructed to see that suspicious outbreaks of disease among hogs are properly quarantined.

The health officer should explain to the owner or keeper the nature and conditions of quarantine, and see that the conditions are rigidly enforced until quarantine is released.

Hog cholera is often spread by water in small streams and lakes, and for this reason hogs must not be buried near any such lake or watercourse.

Poultry should not be allowed access to yards or pens where hogs are confined during the hog cholera season, and pigeons and crows should be shot or otherwise frightened away, because of danger that they may spread the disease.

The health officer or inspector should always wear overalls and overshoes or rubbers when going among diseased hogs. These overalls and overshoes or rubbers should always be kept a safe distance from healthy hogs and from other agents which might convey the disease.

Quarantine cards must not be removed until six months after the last hog has died or recovered, and the premises disinfected in a way satisfactory to the local board of health.

Farmers should be urged to dispose of marketable hogs for slaughter as soon as suspected hog cholera appears in the neighborhood.

Racks and wagon boxes used for hauling such hogs must be tight and so constructed at the bottom as to prevent the scattering of manure and litter along the highway.

Racks and wagon boxes, which have been used for transporting such hogs, must be thoroughly disinfected as soon as the work is finished. All parts of the wagon that have come in contact with the hogs or litter must be thoroughly disinfected. Five per cent solution of crude carbolic acid in water is cheap and effective.

Neighbors on whose farms the disease has not yet appeared should never be allowed to help haul the hogs from infected farms, as there is great danger that the disease will be spread from farm to farm by such action.

The following placards are required to be posted in a conspicuous place by owners of swine in a community where the disease exists:

MINNESOTA STATE BOARD OF HEALTH.

HOG CHOLERA!

EXISTS ON THESE PREMISES.

All persons, excepting the owner, duly authorized attendants, or medical advisers, are forbidden to enter any inclosures where hogs are kept on these premises, until this card has been removed by permission from the State or local Board of Health.

Hogs must not be removed from these premises after date of this card, until six months after the last case of suspicious swine disease has died or recovered, except in the following cases: 1st, by permission in writing given by the State Board of Health; and 2d, dressed carcasses of healthy hogs killed under inspection of the State or local Board of Health.

No hogs, excepting those hereby quarantined and their offspring, shall be allowed upon these premises until six months after the last hog has died or recovered. During this period of six months no other domestic animal shall be permitted in these pens for any reason whatever.

Parties living on this place must not go near pens or yards where hogs are kept on other farms.

Keepers of these hogs will be held responsible for the unauthorized removal of this notice, and for allowing any swine hereby quarantined to escape from these pens or yards and run at large.

By order of

_____, Health Officer.

Dated _____, 19—.

CHAPTER 233, LAWS OF 1897 (Minnesota).—Section 9. Any person violating any provision of this Act or any rule or regulation made by the State Board of Health, or by any local Board of Health, or any order made by any such board under the authority hereof, shall be guilty of a misdemeanor and be punished by a fine of not less than twenty-five (25) or more than one hundred (100) dollars, or by imprisonment for not less than thirty (30) or more than ninety (90) days.

[For Use by Owners of Hogs.]

NOTICE.

All unauthorized persons are forbidden, under penalty of the law, to approach on these premises nearer than 50 feet to any pens or yards where hogs are confined.

Signature of owner.

CHAPTER 233, LAWS OF 1897 (Minnesota).—Section 11. Whenever during the prevalence in the State of any contagious or infectious disease among domestic animals, the owner shall post on his premises a notice forbidding all persons not authorized by State or local Boards of Health to enter any building or inclosure on said premises, without permission from said owner, it shall be a misdemeanor to enter upon such premises, punishable by a fine of not less than twenty-five dollars (\$25) nor more than one hundred dollars (\$100), or by imprisonment for not less than thirty (30) days nor more than ninety (90) days.

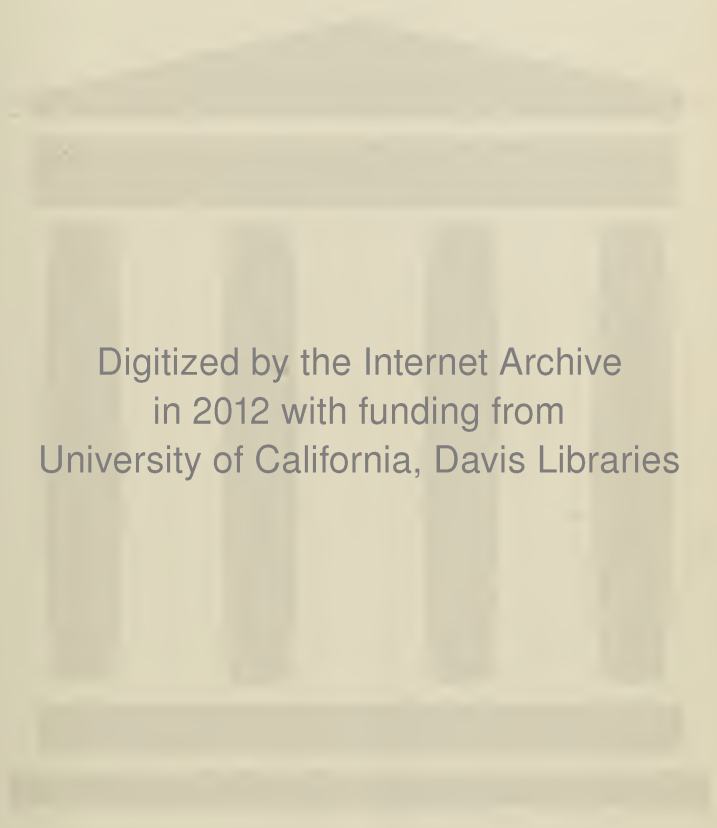
Swine Plague.—This disease is as common as hog cholera, and most outbreaks of the cholera are complicated by it. The symptoms do not greatly differ from those of hog cholera, except that it is more commonly a disease of the lungs, and consequently there is apt to be coughing. The treatment and methods of sanitation do not differ markedly from those laid down for hog cholera. In consequence, the definite recognition of the disease is not of great practical importance to the owner of the animal.

Soap Powder Poisonous to Hogs.—Some deaths among hogs in New York State were found by Dr. V. A. Moore, of the New York State Veterinary College, to be caused by one of the soap powders in common use. Upon investigation it was found that the soap powder was used in washing dishes in a kitchen, and that the dishwater found its way to the hogs in swill. Carefully conducted experiments later showed that pigs could be killed by feeding them amounts of soap powder smaller than commonly used in kitchens. In cases of deaths among swine it is, therefore, desirable to ascertain that the food is wholesome.

SACRAMENTO:

W. W. SHANNON, - - SUPT. STATE PRINTING.

1903.



Digitized by the Internet Archive
in 2012 with funding from
University of California, Davis Libraries

<http://www.archive.org/details/hogcholera03ward>

